

ABSTRACT OF THE DISCLOSURE

A magnetic sensing element is provided, in which magnetization of a free magnetic layer is likely to fluctuate
5 when the track width is further reduced, and thereby, the magnetic field detection sensitivity can be improved. A second free magnetic layer having a dimension W_2 in the track-width direction is laminated on a first free magnetic layer having a dimension W_1 in the track-width direction
10 while the dimension W_2 is larger than the dimension W_1 . The film thickness t_a of the free magnetic layer in the track-width region A is made larger than the film thickness t_b of the free magnetic layer in both side regions B and B. Consequently, the magnetic flux density in the track-width
15 region A of the free magnetic layer resulting from the static magnetic fields generated from both the side regions B and B of the free magnetic layer can be reduced, a dead zone which occurs in the track-width region A of the free magnetic layer can be reduced, and therefore, the magnetic field detection
20 sensitivity is improved.